

Shamika Konara

CONTACT

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SUMMARY

Aspiring Data Engineer with robust experience in cloud infrastructure, ETL pipeline development, and real-time data solutions, complemented by a strong background in advanced data analytics. Skilled in deploying scalable work flows with Apache Airflow and modern cloud platforms (AWS, GCP, Azure), integrating powerful BI solutions, and automating CI/CD pipelines. Demonstrated success in data-driven projects spanning Power BI dashboard development, machine learning application deployment, and end-to-end data pipeline orchestration, with a commitment to leveraging analytics expertise for innovative engineering solutions.

EDUCATION

SLTC Research University | 2021–2025

B.Sc. Hons in Data Science

GPA – 3.6

University of Sri Jayawardenapura |

2021–2026 Jan

B.Tech Hons in Mechatronics

GPA – 3.5 (Graduate on Jan 2026)

EXPERIENCE

Data Analyst Intern (Oct 2024 – Apr 2025)

- Developed 15+ advanced Power BI dashboards solving complex data problems using DAX measures, including PDCA Trigger Chart Dashboard, KPI Monitoring Dashboard, Cost of Quality Dashboard, and Checker EPF Dashboard for enhanced decision making processes
- Designed and integrated Power Apps into workflows, enhancing interactivity and enabling seamless data management across cross-functional teams
- Performed data ingestion and preparation using Microsoft Fabric, establishing robust data pipelines for analytics

PROJECTS

Production-Grade IoT Environmental Monitoring Platform with AWS & ML

Designed a real-time IoT air quality monitoring solution, combining edge device data acquisition with a serverless AWS architecture. Deployed Apache Airflow ETL pipelines, XGBoost ML models, and automated dashboards.

Technologies: AWS (IoT Core, Lambda, S3, DynamoDB, Glue, Athena, CloudWatch), Apache Airflow, Docker Compose, MQTT, XGBoost, Python, SQL, Grafana, InfluxDB, MariaDB, Node RED

YouTube Data Pipeline using Air flow, Docker, and PostgreSQL

Built a production ML pipeline for survival prediction with Airflow (Astronomer), Dockerized CI/CD, real-time drift detection, and monitoring (Prometheus, Grafana). Integrated Redis feature store and deployed an interactive Flask web app.

Technologies: Python, PostgreSQL, Docker, Apache Airflow, YouTube API, Postman, SODA, pytest, GitHub Actions

Hotel Reservation Prediction using MLOps on Google Cloud

Built an end-to-end MLOps pipeline for hotel reservation cancellation prediction, with automated data processing, model training, CI/CD (Docker, Jenkins), and cloud deployment for real-time inference. Served predictions via a Flask web app on GCP Cloud Run and tracked experiments with MLflow.

Technologies: Python, Flask, ML flow, Docker, Jenkins, GitHub, GCP (Cloud Run, Cloud Storage), Scikit-learn, Pandas

Cloud-Native CI/CD Pipeline for Weather Prediction App on GKE

Implemented an automated CI/CD workflow to build, test, and deploy an ML-driven weather prediction app on Google Kubernetes Engine. Integrated GitHub Actions, Docker, and Google Artifact Registry for secure, scalable deployments and achieved zero-downtime rolling updates with Kubernetes manifests.

Technologies: GitHub Actions, Docker, Google Artifact Registry, Kubernetes (GKE), Python, Flask, Machine Learning, YAML, GCP IAM & Security

BTC Whale Alert Analytics using DBT, Snowflake & Power BI

Developed an automated analytics pipeline for real-time Bitcoin whale alert processing, integrating public S3 data into Snowflake , transforming with DBT and visualizing in Power BI. Built modular DBT models, automated CI/CD with GitHub Actions, and delivered interactive dashboards for monitoring high-value blockchain transactions.

Technologies: DBT, Snowflake, Power BI, GitHub Actions, SQL, Python, AWS S3

RESEARCH PROJECTS

Smart Squad Selection: Data-Driven Optimization of Sri Lanka's T20I Team Final Year Research Project – SLTC

Leveraged data analytics and machine learning to optimize the selection of Sri Lanka's T20I cricket team for 2025, integrating performance metrics, fan insights, and predictive models for enhanced decision-making.

Technologies: Python, Pandas, Scikit-learn, Genetic Algorithms, Flask, Streamlit, BeautifulSoup, Google Forms, RAG Chatbot, React

Object Transportation using Collaborative Robots Final Year Research Project – USJP

Designing and developing a collaborative robotic system using two ESP32 microcontrollers for coordinated object transportation with advanced control mechanisms by implementing inter-device communication protocols using ESP-NOW for real-time coordination and PID(Proportional-Integral-Derivative) control algorithms.

Technologies: ESP32, ESP-NOW, PID Control, Embedded C++, Robotics

TECHNICAL SKILLS

Programming Languages: Python, SQL, R

Big Data & ETL/ELT Tools: Air flow, DBT, Kafka, Spark

Cloud Platforms: AWS, GCP, AZURE

Databases & Data Warehousing: Snowflake, PostgreSQL, MariaDB, InfluxDB, DynamoDB

Data Analytics & Visualization: Power BI, Grafana, Prometheus, Tableau basics

DevOps & Containerization: Docker, Kubernetes (GKE), Docker Compose, GitHub Actions, Jenkins, CI/CD Pipelines

Data Science & ML: Scikit-learn, Tensorflow, Pandas, NumPy, Genetic Algorithms

Orchestration & Messaging: Apache Air flow, Node-RED, MQTT

Other Tools: GitHub, Linux, Postman, SODA, Flask, Streamlit

CERTIFICATIONS

Astronomer Certification for Apache Airflow 3 Fundamentals – Astronomer
Oracle Analytics Cloud 2025 Certified Professional – Oracle
ETL and Data Pipelines with Shell, Airflow and Kafka – IBM
Big Data Modeling and Management Systems – UC San Diego
Data Visualization with MS Power BI – IIT
IBM Data Science Professional Certificate – IBM
IBM Data Analyst Professional Certificate – IBM

VOLUNTEERING

Member of AIESEC (2023) – SLTC
Member of VOW Society (2023)- USJP
Member of Mechatronics Society (2024–2025) – USJP

REFERENCES

Dr(Eng)Akila Wijethunge Mechatronics Technology, Department of Materials and Mechanical Technology, Faculty of Technology, University of Sri Jayewardenepura Email : akilawijethunge@sjp.ac.lk Tel: 0776078622	Mr. Aruna Nishantha Senior Executive Linea Aqua – Hanwella Email : ArunaN@lineaaqua.com Tel: 0773955977
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